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(12) **DESCRIPTION OF INVENTION**
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(73) Combined Scientific-Technical Association for Subterranean Electricity Production
Procedures and Technology Development.
(56) USSR Patent No. 941587, Cl. E 21B 43/295, 1982
USA Patent No. 299/2, 1978
USSR Patent No. 1560735, Cl. E 21B 43/295, 1990.
(54) **A METHOD FOR COAL BED PROCESSING AND THE EQUIPMENT FOR ITS
IMPLEMENTATION**
(57) Utilization: This invention deals with the mining industry, and may be utilized with
subsurface and with open development of coal deposits. The essence of the invention:
the coal beds are processed by columns or through holes by combustion and gasification
of coal inside the bed, with the properly purified and electrochemically processed
products of gasification being converted into electricity by means of a fuel cell battery;
the oxidation product of hydrogen - one of the main components of the fuel mixture (the
coal gasification product) - namely water, is converted within the waste-heat boiler into
steam by afterburning of residual fuel, remaining after processing in the fuel cell battery;
this steam, together with the inert carbon dioxide - produced by oxidation of the carbon
monoxide of the fuel mix - is fed into the combustion zone of the coal within the bed,
and the regenerated hydrogen and carbon monoxide are again fed to the fuel cell battery.
2 pages, 3 claims, 2 illustrations.